***Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ P: \_\_\_\_\_\_\_***

CW #33 Area and Perimeter GRASP Review

GEOMETRY

**MEA 601** – Use relationships involving area, perimeter, and volume of geometric figures to compute another measure.

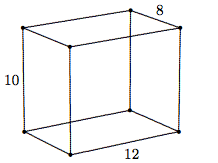
# Objective(s):

4.1 Given perimeter/side lengths of a geometric figure, find the perimeter/side lengths of another geometric figure.

4.2 Given the area of a figure, find the new dimensions of an increase/decreased area.

1) If the width and length of a rectangle are both increased by 10%, by what percent does the area of the rectangle increase? By what percent does the perimeter of the rectangle increase?

2) A a rectangle is inscribed within a circle. The coordinates of the rectangle are (-2,3); (16,3); (-2,-5); and (16,-5). What is the area and circumference of the circle?

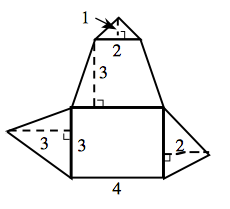
3) The figure at the right shows a rectangular box whose dimensions are 8 cm by 10 cm by 12 cm.

 (a) Find the volume of the solid.

(b) What is the combined area of the six faces?

 (c) If you were to outline the twelve edges of this box with decorative cord, how much would you need?

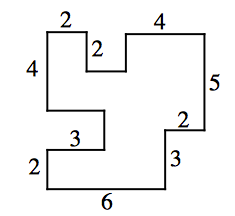
4) Find the area of the figure below.

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5) The diameter of a circle extends from (-15,2) to (3,2). If the area of this circle is the same as a square, what is a side length of that square?

6) A rectangle and a square have the same perimeter. The square has coordinates of (-4,7); (2,7); (-4,1) and (2,1). What is the width of the rectangle if the length is 10?

7) What is the area and perimeter of the shape below?



8) A square is created using the radius of a circle with an area of 64π square units. What is the area and perimeter of the square?

9) Mr. Milkie is creating a field for Noble for future soccer and football games. The field is created with a rectangle and semicircles at either end. The rectangular portion has the dimensions of 150 yards and 60 yards. What is the total playing area of the fields? How much fencing would Mr. Milkie need to purchase to fence in the field?